

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference LP2002PC00	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 03/07411	International filing date (day/month/year) 09/07/2003	(Earliest) Priority Date (day/month/year) 09/07/2002
Applicant LONZA AG		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.



None of the figures.

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International Application No

EP 03/07411

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07C213/08 C07D307/46 C07D333/22 C07C225/12 C07C221/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 457 559 A (LILLY CO ELI) 21 November 1991 (1991-11-21) cited in the application the whole document ---	1-9, 13
A	EP 0 650 965 A (LILLY CO ELI) 3 May 1995 (1995-05-03) cited in the application the whole document ---	1-9, 13
A	EP 0 046 288 A (RUHRCHEMIE AG) 24 February 1982 (1982-02-24) page 9, line 18 - line 27; example 1 ---	1
A	F. F. BLICKE: "The Mannich reaction" ORGANIC REACTIONS, vol. I, 1942, pages 303-341, XP002218609 the whole document ---	1
-/--		

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

27 October 2003

Date of mailing of the international search report

03/11/2003

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Rufet, J

INTERNATIONAL SEARCH REPORT

International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>KIYOSHI MATSUMOTO: "Synthese unter hohem Druck: Mannich-Reaktion....." ANGEWANDTE CHEMIE., vol. 94, no. 12, 1982, page 937 XP002218608 VCH VERLAGSGESELLSCHAFT, WEINHEIM., DE ISSN: 0044-8249 page 937</p>	1
X	<p>----- CHEMICAL ABSTRACTS, vol. 56, no. 1, 1962 Columbus, Ohio, US; abstract no. 363g, G. I. DENIS ET AL.: "Alkylation of aromatic amines by the Mannich bases." page 363; column 1; XP002218610 abstract & IZVEST. VYSSHIKH UCHEB. ZAVEDENII, KHIM. I KHIM. TEKHNOL., vol. 4, 1961, pages 426-428,</p>	9
X	<p>----- CHEMICAL ABSTRACTS, vol. 52, no. 13, 1958 Columbus, Ohio, US; abstract no. 11067b, LEWIS W. NOBLES ET AL.: "Ketonic Mannich bases....." page 11067; column 1; XP002218611 abstract & J. AM. PHARM. ASSOC., SCI. ED., vol. 67, 1958, pages 77-81,</p>	9
X	<p>----- CHEMICAL ABSTRACTS, vol. 63, no. 8, 1965 Columbus, Ohio, US; abstract no. 9900g, R. LANDI-VITTORY ET AL.: "Derivatives of benzofuran and coumaran." page 9899; column 2; XP002218612 abstract & FARMACO (PAVIA), vol. 18, no. 2, 1965, pages 109-118,</p> <p>----- -/--</p>	9

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CHEMICAL ABSTRACTS, vol. 67, no. 11, 1967 Columbus, Ohio, US; abstract no. 53946c, B. I. ARDASHEV ET AL.: "Synthesis of Beta-arylamino ketones of the furan series." page 5066; column 1; XP002218613 abstract & KHIM. GETEROTSIKL. SOEDIN., vol. 1, 1967, pages 7-9, ---	9
X	CHEMICAL ABSTRACTS, vol. 101, no. 13, 1984 Columbus, Ohio, US; abstract no. 110812c, SAAKYAN, A. M. ET AL.: "studies on the chlorination of organic compounds...." page 647; column 2; XP002218614 abstract & ARM. KHIM. ZH., vol. 37, no. 4, 1984, pages 261-265, ---	9
X	CHEMICAL ABSTRACTS, vol. 95, no. 1, 1981 Columbus, Ohio, US; abstract no. 6707u, AGARWAL, S. K. ET AL.: "Synthesis, characterization and screening of antibacterial activity of some new Mannich bases." page 635; column 1; XP002218615 abstract & J. INDIAN CHEM. SOC., vol. 57, no. 12, 1980, pages 1240-1241, ---	9
X	CHEMICAL ABSTRACTS, vol. 70, no. 9, 1969 Columbus, Ohio, US; abstract no. 37630b, TILAK, B. D. ET AL.: "Synthesis of nitrogen heterocyclics." page 331; column 1; XP002218616 abstract & INDIAN J. CHEM., vol. 6, no. 8, 1968, pages 422-427, --- -/--	9

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CHEMICAL ABSTRACTS, vol. 102, no. 1, 1985 Columbus, Ohio, US; abstract no. 6087e, XU, XIUJUAN ET AL.: "Mannich reaction with...." page 552; column 1; XP002218617 abstract & HUAXUE XUEBAO, vol. 42, no. 7, 1984, pages 688-692, ---	9
X	CHEMICAL ABSTRACTS, vol. 59, no. 2, 1963 Columbus, Ohio, US; abstract no. 1625b, N. SALDABOLS ET AL.: "New Mannich bases..." page 1625; column 1; XP002218618 abstract & LATVIJAS PSR ZINATNU AKAD. VESTIS, KIM. SER., vol. 2, 1962, pages 309-310, ---	9
A	W. LEWIS ET AL.: "Ketonic Mannich bases....." JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, vol. 47, no. 2, 1958, pages 77-81, XP001115095 page 80, column 2 -page 81, column 2 -----	9

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Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0457559	A	21-11-1991	CA 2042346 A1	18-11-1991
			EP 0457559 A2	21-11-1991
			FI 912280 A	18-11-1991
			HU 57760 A2	30-12-1991
			IE 911677 A1	20-11-1991
			JP 4226948 A	17-08-1992
EP 0650965	A	03-05-1995	US 5362886 A	08-11-1994
			AT 199084 T	15-02-2001
			AU 685494 B2	22-01-1998
			AU 7572094 A	04-05-1995
			BR 9404045 A	13-06-1995
			CA 2133899 A1	13-04-1995
			CN 1109470 A , B	04-10-1995
			CZ 9402465 A3	17-05-1995
			DE 69426663 D1	15-03-2001
			DE 69426663 T2	21-06-2001
			DK 650965 T3	26-02-2001
			EP 0650965 A1	03-05-1995
			ES 2153850 T3	16-03-2001
			FI 944773 A	13-04-1995
			GR 3035715 T3	31-07-2001
			HU 68943 A2	28-08-1995
			IL 111188 A	15-06-1998
			JP 7188065 A	25-07-1995
			NO 943825 A	18-04-1995
			NZ 264633 A	22-09-1997
			PL 305326 A1	18-04-1995
			PT 650965 T	31-05-2001
			RU 2127269 C1	10-03-1999
			SI 650965 T1	30-06-2001
			TW 381090 B	01-02-2000
			US 5491243 A	13-02-1996
			ZA 9407839 A	09-04-1996
EP 0046288	A	24-02-1982	DE 3031248 A1	01-04-1982
			BR 8105266 A	27-04-1982
			CA 1150313 A1	19-07-1983
			DE 3162298 D1	22-03-1984
			EP 0046288 A1	24-02-1982
			JP 1286702 C	31-10-1985
			JP 57054150 A	31-03-1982
			JP 60009020 B	07-03-1985
			US 4515986 A	07-05-1985